

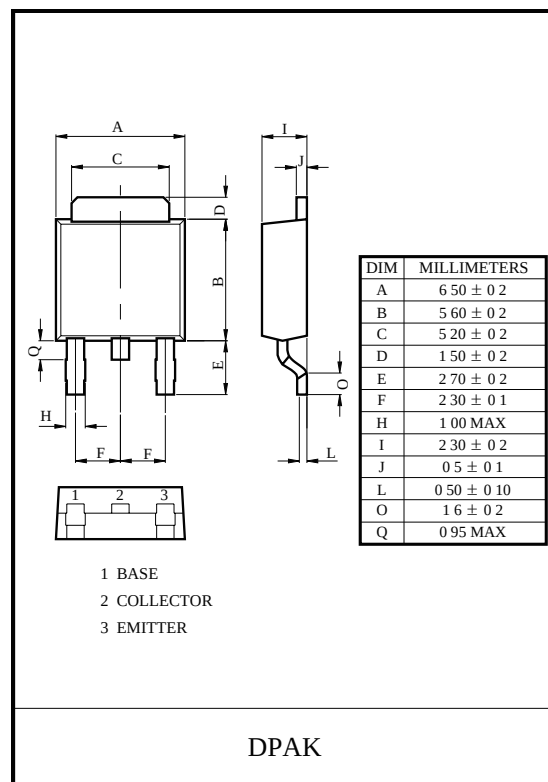
FTB1412 TRANSISTOR (PNP)

FEATURES

Power Amplifier Applications

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-20	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current –Continuous	-5	A
P_C	Collector Power Dissipation	1	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$

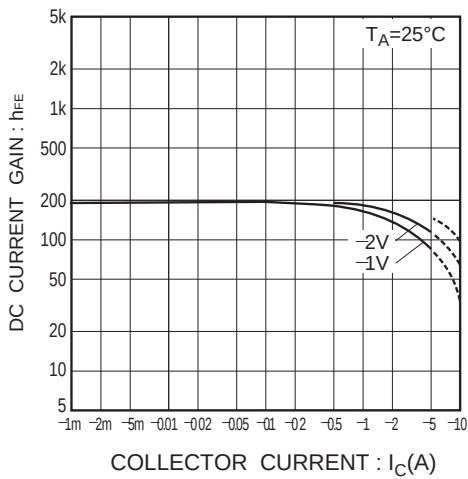
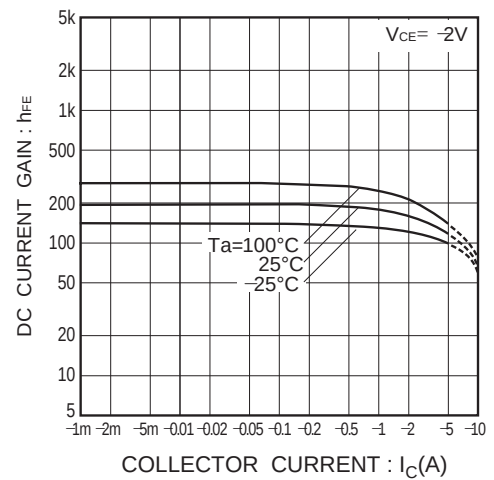
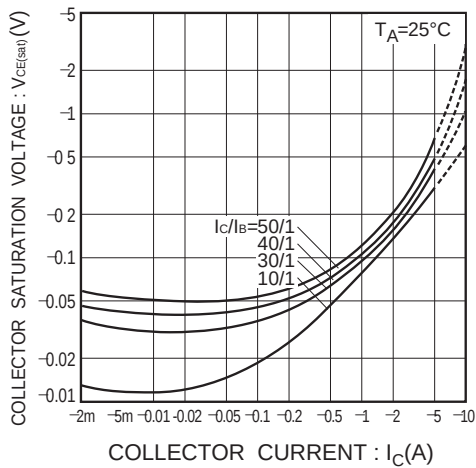
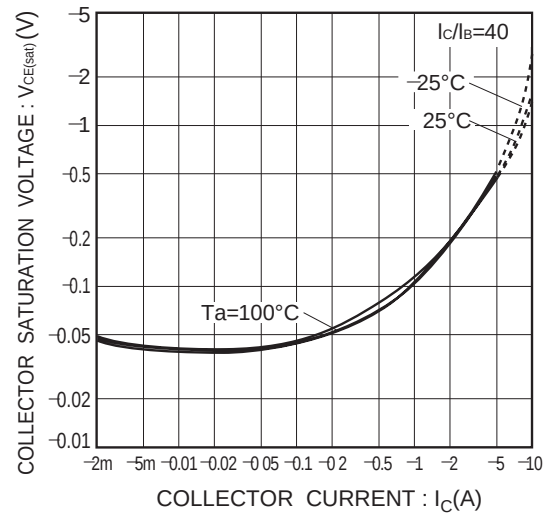
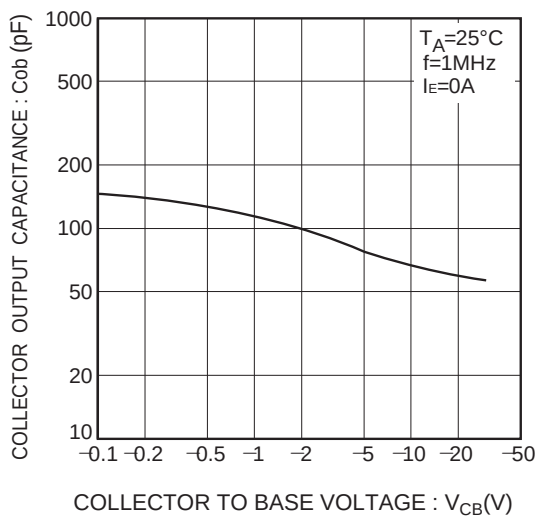
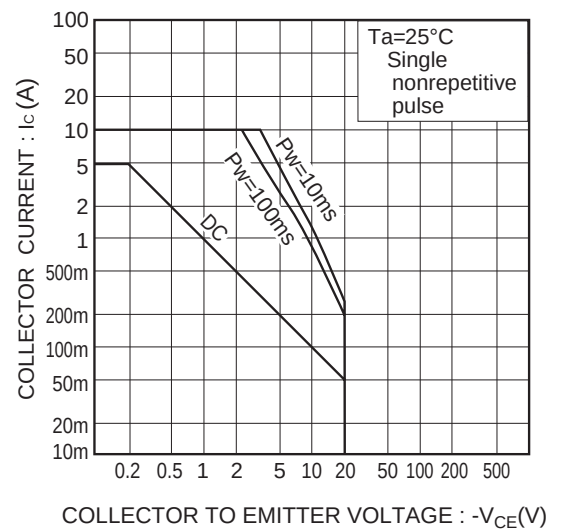


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu\text{A}, I_E = 0$	-30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu\text{A}, I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$			-0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-0.5	μA
DC current gain	h_{FE}	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -4\text{A}, I_B = -100\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE} = -6\text{V}, I_C = -50\text{mA}, f = 30\text{MHz}$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -20\text{V}, I_E = 0, f = 1\text{MHz}$		60		pF

CLASSIFICATION OF h_{FE}

Rank	P	Q	R
Range	82-180	120-270	180-390


Fig.1 DC current gain vs collector current

Fig.2 DC current gain vs. collector current

Fig.3 Collector-emitter saturation voltage vs. collector current

Fig.4 Collector-emitter saturation voltage vs. collector current

Fig.5 Collector output capacitance vs. collector-base voltage

Fig.6 Safe operation area